REMARKS/ARGUMENTS

In the Office Action, the Examiner allowed claims 4-41; rejected claims 1-3 and 42 under 35 U.S.C. 102(b) as being anticipated by *Wessel* et al. (US Pat. No. 6,275,685); and rejected claim 43 under 35 U.S.C. 103(a) as being unpatentable over *Wessel* et al. The Applicant appreciates the indication of allowable subject matter. The rejections are fully traversed below. Reconsideration of the application is respectfully requested based on the following remarks.

Claims 1-3 and 42 have been amended to further clarify the subject matter regarded as the invention. New claims 44-46 have been added. Support for the new claims can be found in the specification on page 14, lines 31-33, and elsewhere. Accordingly, claims 1-46 are now pending in this application.

PATENTABILITY OF CLAIMS 1-3, 42, AND 43

Claim 1 pertains to a predistorter operable to compensate for distortion introduced by a semiconductor device. Specifically, claim 1 recites "an index module operable to generate index values from a combination of current and past values of an input signal intended for the semiconductor device." Claim 1 also recites "a lookup table operable to provide one of a plurality of correction factors in response to each of the index values." Furthermore, claim 1 recites "a conditioning module operable to apply the correction factor to a future value of the input signal, wherein application of the correction factor to the future value of the input signal compensates, at least in part, for portions of the distortion corresponding to both the current and past values of the input signal." Claim 42 pertains to an electronic system that includes the predistorter and recites similar limitations as claim 1. That is, claims 1 and 42 recite among other things that index values are generated from past and current values of an input signal and that the lookup table can provide a correction factor in response to each of the index values.

Claim 2 also pertains to a predistorter operable to compensate for distortion introduced by a semiconductor device. Claim 2 recites "a lookup table operable to provide a correction factor in response to an index value generated from a plurality of past values of an input signal intended for the semiconductor device." Claim 2 also recites "a conditioning module operable to apply the correction factor to a current value of the input signal, wherein application of the correction factor to the current value of the input signal compensates, at least in part, for portions of the distortion corresponding to the plurality of past values of the input signal." That is, claim 2 recites among other things that an index value is generated from a plurality of past values of an

Application No. 10/781,082   Page 9 of 11
ALTRP097/A1089

input signal and that the lookup table can provide a correction factor in response to the index value.

In contrast, *Wessel* et al. fails to teach or suggest having a predistorter as claimed. In the Office Action, the Examiner stated that "*Wessel* discloses in figure 4 an amplifier circuit that teaches an module for generat[ing] index value (34) of input signal, and a look up table (70) for providing correction factors in response to each of index value." However, element 34 (envelope detector) merely generates a signal 36 from current values of input signal 10. (See Figure 4 where envelope detector 34 receives only a single input that corresponds to input signal 10) Signal 36 is then filtered by a low-pass anti-alias filter 702 and digitized by an analogue-to-digital converter (ADC) 704 where the m-bit output of the ADC is transferred to an address bus 760. The address bus 760 is then used to select an address in RAM 710 and RAM 740 for respective phase and gain correction values. (See Column 7, line 65 to Column 8, line 8; Figure 6) That is, the phase and gain correction values are provided in response to a form of signal 36, which is generated from current values of input signal 10 and not from past values of input signal 10.

In view of the above, *Wessel* et al. does not teach or disclose "an index module operable to generate index values from the combination of current and past values of an input signal intended for the semiconductor device" much less "a lookup table operable to provide one of a plurality of correction factors in response to each of the index values." *Wessel* et al. also does not teach or disclose "a lookup table operable to provide a correction factor in response to an index value generated from a plurality of past values of an input signal intended for the semiconductor device." Therefore, it is respectfully submitted that claims 1, 2, and 42 are patently distinct from *Wessel* et al.

The Examiner's rejections of dependent claims 3 and 43 are respectfully traversed. Claims 3 and 43 depend directly from independent claims 2 or 42 and, therefore, are respectfully submitted to be patentable over cited art for at least the reasons set forth above with respect to claims 2 or 42. Further, claims 3 and 43 require additional elements that when considered in context of the claimed inventions further patentably distinguish the invention from the cited art.

Application No. 10/781,082   Page 10 of 11
ALTRP097/A1089

SUMMARY

It is respectfully submitted that all pending claims are allowable and that this case is now in condition for allowance. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at the telephone number set out below.

If any fees are due in connection with the filing of this Amendment, the Commissioner is authorized to deduct such fees from the undersigned's Deposit Account No. 50-0388 (Order No. ALTRP097).

Respectfully submitted,
BEYER WEAVER & THOMAS, LLP

Desmund Gean
Reg. No. 52,937

BEYER WEAVER & THOMAS, LLP
P.O. Box 70250
Oakland, CA 94612-0250
Telephone: (510) 663-1100
Facsimile: (510) 663-0920

Application No. 10/781,082   Page 11 of 11
ALTRP097/A1089